ABSTRACT

The present invention provides a pre-fetch controller and a method thereof for efficiently pre-fetching data from a memory device. The method includes initializing a counter value; fetching a data from the memory and subtracting the counter value by a first value when a pre-fetching is activated; adding a second value to the counter value when a cache hit occurs; comparing the counter value with a first threshold value; and when the counter value is smaller than the first threshold value, stopping pre-fetching the data from the memory.